EXECUTIVE SUMMARY

The 20th Fighter Wing (20 FW), based at Shaw Air Force Base (AFB), South Carolina, currently manages and trains in military training airspace overlying parts of the states of South Carolina and Georgia.

This Draft Environmental Impact Statement (EIS) addresses potential environmental consequences of a proposal to improve airspace for training pilots stationed at Shaw AFB and McEntire Air National Guard Station (ANGS), South Carolina. These improvements are proposed by the 20 FW and called the Airspace Training Initiative (ATI). These proposed changes include creating new airspace, modifying the configuration of existing airspace, returning airspace to the National Airspace System (NAS) to expand general aviation airspace access, establishing additional locations for electronic training transmitters to increase the realism of pilot training, and extending the use of defensive countermeasures (chaff and flares) in the new and modified airspace. The ATI training airspace would provide pilots the opportunity to develop conditioned responses to threats and provide adequate space for combat training maneuvers. ATI would increase training opportunities for the Shaw AFB-based 20 FW, the McEntire ANGS-based 169th Fighter Wing (169 FW), and transient users of the 20 FW-managed military airspace in South Carolina and Georgia. ATI would support the full range of maneuvers and tactics and would improve aircrew combat success. If this proposal is implemented, Shaw AFB could return certain Special Use Airspace (SUA) to the National Airspace System (NAS) because it would no longer be required.

The United States Air Force (Air Force) is the proponent for the ATI proposal and is the lead agency for the preparation of the EIS. The Federal Aviation Administration (FAA) is a cooperating agency. Congress has charged the FAA with administering all navigable airspace in the public interest as necessary to ensure the safety of aircraft and the efficient use of such airspace. Portions of ATI propose to change the configuration of airspace and establish new airspace. FAA participation and coordination with the Air Force were requested so that all National Environmental Policy Act (NEPA) and other assessments required by both agencies could proceed concurrently. As a cooperating agency, FAA has participated in public scoping and preparation of this Draft EIS.

This Draft EIS is issued for public and agency review and comment by the Air Force and the FAA. This document has been prepared in accordance with NEPA and its implementing regulations. Comments on the draft will be incorporated into the Final EIS. These comments, in addition to the EIS analyses, will be considered in decision-making regarding the ATI proposal.

PURPOSE AND NEED

The purpose of ATI is to provide effective and realistic military training airspace that is sized and configured to support training for the full range of 20 FW and 169 FW F-16CJ+ missions. The F-16CJ+ has new technologies that improve target acquisition and standoff capabilities. The F-16CJ+ squadrons at Shaw AFB and McEntire ANGS have new missions and tactics to follow through with the Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) missions. Shaw AFB and McEntire ANGS F-16CJ+ aircraft comprise 70 percent of the Air Force's continental United States (U.S.)-based SEAD and DEAD capabilities.

The 20 FW managed training airspace does not permit follow through from initial target acquisition to confirmation of target destruction. The airspace does not adequately support training at lower altitudes to visually acquire, identify, and simulate destruction of threats. The Air Force needs to support state-of-the-art aerial combat and surface attack missions of the F-16CJ+ multi-role fighter. Training airspace is needed that is configured to allow Shaw AFB aircrews to practice current tactics, to highly tune offensive and defensive pilot skills, and to make full use of F-16CJ+ mission assignments.

Pilots from the 20 FW and 169 FW must be trained and prepared to face the world's most sophisticated hostile tactics and anti-aircraft systems when they deploy as part of the Air Force's Aerospace Expeditionary Force (AEF). The proposed ATI airspace changes provide as realistic a combat environment as feasible to enhance combat capabilities and survivability of Shaw AFB and McEntire ANGS aircrews as they execute their mission and support national military and security objectives.

PROPOSED ACTION AND ALTERNATIVES

This Draft EIS analyzes the Proposed Action, Alternative A, Alternative B, and the No-Action Alternative. Details of each are presented in Table ES-1. Figure ES-1 presents an overview of the airspace potentially affected by ATI.

ENVIRONMENTAL CONSEQUENCES

NEPA requires focused analyses on environmental resources potentially affected by the Proposed Action or an alternative. Operational requirements for ATI, environmental considerations, and public and agency inputs were used to identify specific environmental resources for consideration in this Draft EIS. The baseline conditions and environmental consequences of the proposed or alternative airspace changes, the consequences of chaff and flare use, and the consequences of training transmitter construction are analyzed for each environmental resource in Chapter 3.0. Cumulative effects and other environmental considerations associated with the Proposed Action and alternatives, as well as past, present, and reasonably foreseeable actions, are presented in Chapter 4.0. The potential direct and indirect environmental consequences are summarized below for each environmental resource.

Airspace Management and Air Traffic Control

Airspace management is defined as the direction, control, and handling of flight operations in the navigable airspace that overlies the geopolitical borders of the U.S. and its territories. Specific concerns of airspace management focus on effects of the proposed airspace changes to non-military users of the airspace. The FAA is responsible for approving and publishing any airspace modifications, creating new airspace, or expanding existing airspace. Modifications to existing Military Operations Area (MOA) airspace and the creation of new MOA airspace would require non-rule-making action by the FAA. Responsibilities, procedures for aircraft operations, air traffic control operations, and utilization of Air Traffic Control Assigned Airspace (ATCAAs) are documented in Letters of Agreement (LOAs) between the scheduling military agency (20 FW) and the applicable Air Route Traffic Control Center (ARTCC) (Atlanta and Jacksonville Centers). These LOAs are supplemental to the procedures in FAA Orders 7110.65 (Air Traffic Control) and 7610.4 (Special Military Operations).

Table ES-1. Description of Proposed Action and Alternatives

	Component	*Proposed Action*	*Alternative A*	*Alternative B*	*No-Action Alternative*
Gamecock MOA	Create new Gamecock E MOA from 8,000 feet MSL to 22,000 feet MSL	YES	YES	YES Gamecock E Low from 8,000 to 13,999 feet MSL; Gamecock E High from 14,000 to 22,000 feet MSL	NO
	Create new Gamecock F MOA underneath Gamecock D in areas that do not overlap with C, from 10,000 feet MSL[1]	Gamecock F to 5,000 feet MSL	Instead, expand Gamecock D MOA to 5,000 feet MSL	Instead, expand Gamecock D MOA to 8,000 feet MSL	NO
	Combine use of Gamecock C and D	YES	YES	YES	Use independently
	Return Gamecock B to NAS	YES	YES	NO	NO
Poinsett MOA	Poinsett: Raise ceiling from 2,500 feet MSL to 5,000 feet MSL	YES	YES	YES	Ceiling remains at 2,500 feet MSL
Bulldog MOA	Bulldog A: Expand Boundary to match up with Bulldog B	YES	YES	Instead, expand Bulldog B to 3,000 feet MSL	Continue with Bulldog B ledge
New Training Transmitters	Place Under Bulldog A, and Gamecock C/D	YES	YES	YES	Continue use of available sites
	Place along Coast	YES	YES	NO	NO
Chaff and Flares	Extend use within new and expanded airspace above 5,000 feet MSL	YES	YES	YES	Continue use in existing airspace

Note: 1. MSL - Mean Sea Level; 10,000 MSL is 10,000 feet above MSL

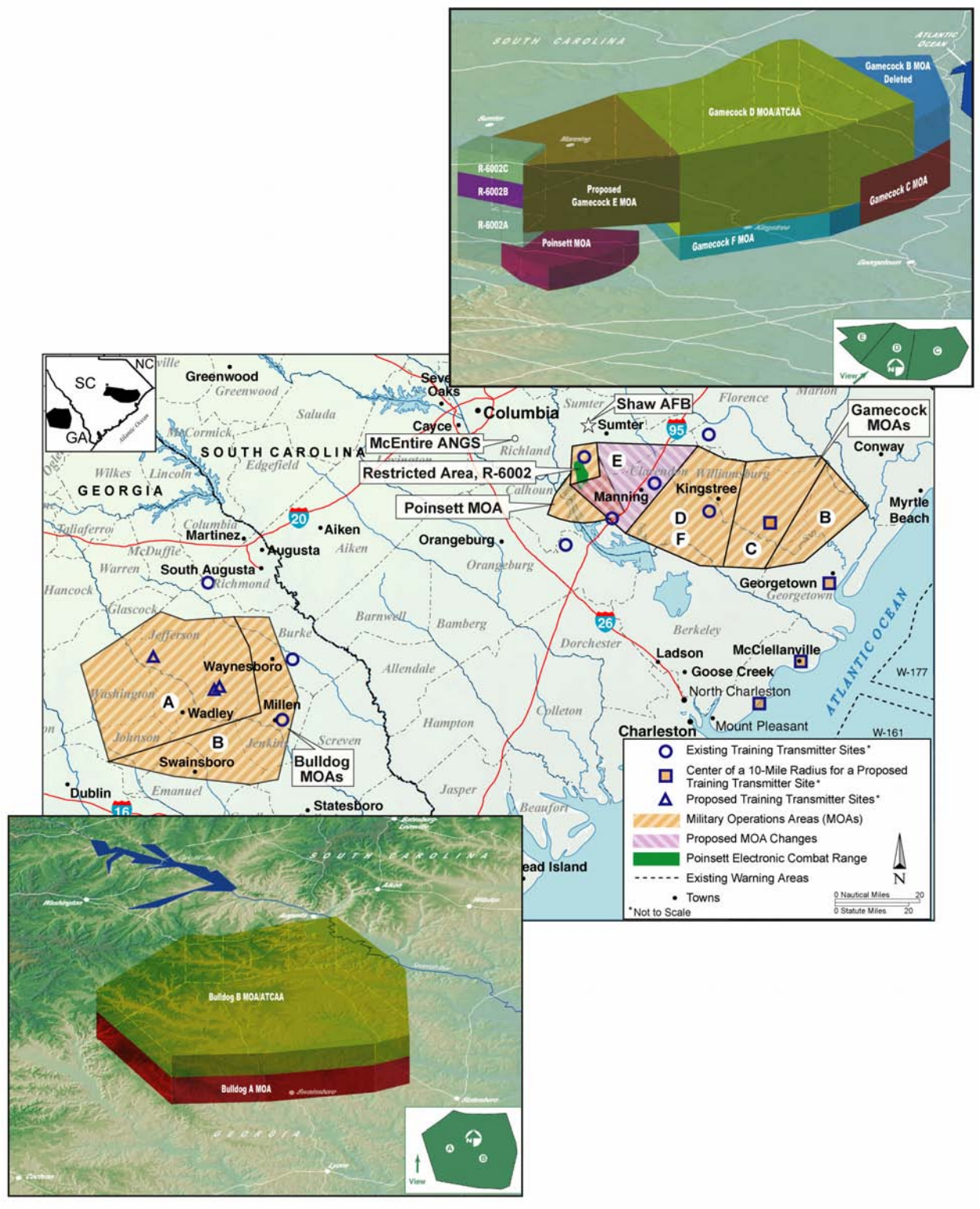

Figure ES-1. Airspace Potentially Affected by ATI

Creating Gamecock E MOA and lowering the floor of Gamecock D MOA were identified as potentially significant impacts to civil aviation by pilots at scoping meetings. Although there would be airspace above and below the new MOAs, and air traffic controllers have complete coverage of aircraft in this airspace, a greater concentration of civil aircraft could occur in the vicinity of the new airspace. The floor of Gamecock F could especially affect air traffic by requiring civil aviation to fly below 5,000 feet MSL or use see-and-avoid rules to traverse the MOA. Alternative B creates Gamecock E High and Low MOAs and an 8,000 foot floor for Gamecock D and retains Gamecock B. These modifications could generally improve civil aircraft transit of the area when compared with the Proposed Action or Alternative A.

The Proposed Action and Alternative A expansion of Bulldog A with a floor of 500 feet above ground level (AGL) beneath Bulldog B was identified as a concern by communities with airports under the expanded airspace. A 3-nautical mile (NM) by 1,500-foot AGL avoidance area would be designated around airports. Similar avoidance areas with specific altitude and spatial requirements would be developed around communities and other noise-sensitive areas within the expanded airspace under all alternatives. Existing airports under Bulldog A have comparable avoidance areas. No significant airspace impacts are anticipated with the avoidance areas charted on airspace maps. Alternative B lowers the floor of Bulldog B to 3,000 feet MSL and does not extend Bulldog A under Bulldog B. Alternative B reduces aviation concerns and does not need new avoidance areas.

The Proposed Action and alternatives were adjusted based on public and agency input. Adjustments include 1) designating Gamecock F rather than lowering Gamecock D; 2) adjusting Gamecock E to have high and low elements; and 3) including a Bulldog alternative with a higher floor under the Bulldog A expansion area. Such options would enable flexibility in airspace management and support civilian aircraft transit of the area.

Most conflicts with Military Training Routes (MTRs), federal airways, jet routes, and private airports would be avoided because the altitude at which these routes are established are either above or below the airspace in the Proposed Action and alternatives. In cases where these routes intersect with the proposed airspace and alternative airspace, deconfliction would be managed as it is for current conditions.

Deployment of training chaff, specifically manufactured to not interfere with FAA ATC radars would be managed through communication between the 20 FW and the ARTCC, resulting in no projected airspace management impacts from expanded chaff use. Use of flares or training transmitter sites would not impact civil air traffic or the ATC system.

Noise

Noise is considered to be unwanted sound that interferes with normal activities or otherwise diminishes the quality of the environment. Concerns regarding noise expressed at scoping meetings included annoyance, effects on rural environment, effects on animals, and effects on recreation areas.

Noise in military airspace is quantified by metrics called the Day-Night Average Sound Level (DNL) and the Onset-Rate Adjusted Monthly Day-Night Average Sound Level (DNLmr). DNLmr accounts for the annoyance associated with the "surprise" effect of noise from high-

speed military aircraft flying at low altitude. Under the Proposed Action and action alternatives, mathematical models calculate that noise levels would increase in those areas under new airspace (Gamecock E) and additional low-altitude airspace (Gamecock D/F and Bulldog A/B).

Implementation of the Proposed Action, Alternative A, or Alternative B does not propose additional training flights while expanding the airspace volume. This results in slightly lower noise exposure under the existing Bulldog A and Gamecock C and B when compared with baseline conditions.

Military aircraft generated average noise is calculated to be from 35 to 37 DNLmr under Gamecock E and D/F. This is within the estimated ambient conditions of from 35 to 44 dB and means that military aircraft could be noticed but would not be a major contributor to average noise conditions. Average military aircraft contributions to noise would noticeably increase under the Bulldog A extension area from less than 35 DNLmr (little contribution to ambient conditions) to 50 DNLmr (substantial contribution to noise conditions). Multiple MTRs traverse the areas proposed for new MOAs or MOA expansion. Cumulative noise levels where existing MTRs overlap with new or expanded MOAs would not exceed 53 DNLmr.

The United States Environmental Protection Agency (USEPA) has identified a DNL of 55 decibels (dB) as a level "requisite to protect public health and welfare with an adequate margin of safety." This is a threshold below which adverse noise impacts are not usually expected (USEPA 1974). The calculated noise levels of 50 DNLmr under the Bulldog A extended airspace for the Proposed Action and Alternative A would not be expected to affect human or animal health but would be noticeable compared to the existing 35 DNLmr. In this area, the number of highly annoyed individuals is projected to increase from approximately 1 percent of the population to approximately 4 percent of the population. Alternative B calculated noise levels in the same area are 39 DNLmr. This means that under Alternative B, military aircraft could be noticed but would not be a major contributor to average noise conditions in the area and the number of highly annoyed individuals would continue at approximately 1 percent. Noise levels under Bulldog A/B combined would be 53 DNLmr for Alternative B as compared to 50 for the Proposed Action and Alternative A, but neither change would be discernible as compared with the existing 52 DNLmr. In all cases, noise levels associated with the use of the proposed reconfigured airspace are below any thresholds that would be expected to cause harm to humans or animals, or damage property.

Noise associated with construction of the training transmitter sites would be localized, intermittent, and of relatively short duration. During operation of the sites, noise due to human presence would be limited and confined to the general area of the site.

Safety

Civil aviation pilots expressed concern that, under the Proposed Action and Alternative A, the modification to the Gamecock MOAs created higher concentrations of civil aircraft that posed a safety risk. FAA and Shaw AFB air traffic control would work together to avoid risks to civil aircraft flying under or above the proposed new airspace. Scheduling of airspace blocks would

be done to assist civil aviation transit. The public expressed concern that the extension of Bulldog A could create a perception that safety at airports under the military airspace was reduced and could possibly affect local development. The inclusion of avoidance areas around the airports may alleviate public concern.

Alternative B contains a split Gamecock E and a higher floor for Gamecock D. These elements could improve the space and scheduling for civilian flights and reduce safety concerns. Alternative B would establish a 3,000-foot MSL floor for Bulldog B and does not extend Bulldog A. These elements would reduce public concern for safety around the local airports when compared with the Proposed Action or Alternative A.

Under the Proposed Action and Alternative A, overall flight safety risks are somewhat reduced in the Gamecock MOAs. Flight safety risks would be minimally increased by the potential for bird/wildlife-aircraft strikes in the expanded Bulldog A MOA. In both the Gamecock and Bulldog MOAs, indicated risk from a bird/wildlife-aircraft strike is not excessive. Airspace modifications that involve developing low altitude airspace could increase bird/wildlife-aircraft strikes. Pilot briefings about seasonal presence of wildlife hazards reduce safety risks.

ATI does not propose any changes to operations and maintenance, ordnance use, or number of training flights. No specific explosives safety risks are associated with the Proposed Action or alternatives because no elements of the Proposed Action have the potential to alter or modify explosives use. An estimated two dud flares a year could fall to the ground under the Bulldog MOAs and two Gamecock MOAs. Although the possibility of a person on the ground being struck and seriously injured by a dud flare cannot be totally discounted, studies have shown that the possibility of such an occurrence is so minute it can be essentially discounted (Air Force 1997a). Dud flares that are not exposed to temperatures in excess of 1,200 degrees should not pose a safety risk. Local agencies would be informed to notify Shaw AFB in the event that a dud flare was located.

Two types of flares are proposed for use in the new and expanded airspace, the M-206 and the Multi Jettison Unit (MJU)-7 A/B. When flares are deployed, plastic parts, aluminum coated wrapping, and felt spacers fall to the ground. Most of the flare debris could be an annoyance if found but would not constitute a safety risk. The potential exception is the MJU-7 A/B Safe and Initiation (S&I) device which weighs 0.045 pounds and could strike the ground with the force of a large hailstone. The number of MJU-7 A/B flares proposed for annual deployment and the area, population, vehicles, and buildings under the Bulldog and Gamecock MOAs were used to calculate the expected frequency of an S&I device striking something or someone. The expected frequency under the Gamecock MOA is calculated to be 1 vehicle and 15 structures annually, and the expected frequency of striking a person is calculated to be 1 in 200 years. Under the Bulldog MOAs, the expected frequency is nearly 1 vehicle and 14 structures per year, and the expected frequency of striking a person is calculated to be 1 in 200 years. No damage to structures would be expected, but vehicles could incur cosmetic damage. A strike to an unprotected person could cause a bruise-like injury. Approximately 20 percent of any strikes to a person could be to the head, and cause a potentially more serious injury. The Air Force has

established procedures for any damage claims that begin by contacting Shaw AFB Public Affairs Office.

Questions were raised at scoping about potential risk from wake turbulence associated with military aircraft. Calculations of F-16CJ+ wing vortex wind speeds from overflights below 1,000 feet AGL produce surface wind speeds of from 6 to 8 mph, which is comparable to ambient wind conditions. No wind vortex impacts are expected from an F-16CJ+ overflight within the Gamecock, Bulldog, or Poinsett MOAs.

Ground safety risks from operation of existing and proposed new training transmitter sites would be minimal because the Air Force would continue to follow applicable regulations, technical orders, and Air Force Occupational Safety and Health (AFOSH) standards.

Air Quality

Areas under the existing and proposed airspace modifications are in air quality attainment. No overall increase in emissions are anticipated from military aircraft training and nearly all training flights occur above the 3,000 feet AGL mixing height for emissions. The minor increases in emissions in the area of the expanded Bulldog A MOA under the Proposed Action, Alternative A, or cumulatively would not affect local or regional air quality. Under Alternative B, training flights would not be proposed to change below the air quality mixing height so there would be no air quality effect. Construction of electronic training transmitter sites could result in transient local increases in emissions that would not significantly affect local air quality. No conformity determination is required.

Physical Resources

Physical resources include soil and water. Chaff and flares and construction of training transmitter sites are the only ATI elements with the potential to affect physical resources. Flares are released above 5,000 feet MSL and burn out in 400 feet, so there is a low probability of a flare-caused fire affecting physical resources. Extensive previous research has shown little to no negative effects of chaff or flare material on soil or water quality. The distribution of chaff fibers would be approximately 3.85 grams (0.12 ounce) per acre per year in the Bulldog A/B MOAs and 3.89 grams (0.12 ounce) per acre per year in the Gamecock MOAs (including Gamecock E). At this deposition rate, chaff is not likely to accumulate or affect soil or water resources. Within the Bulldog and Gamecock MOAs, an average of one flare per 84 and 120 acres would be released, respectively.

Materials that fall to the ground after chaff and flare deployment consist of plastic end caps, plastic sliders (or pistons), the S&I device (MJU-7 A/B only), felt spacers, and aluminum coated wrapping material that could be from 1-inch x 1-inch up to 3-inches x 13 inches. The deposition rates under the MOAs are projected to be approximately one piece of chaff or flare debris per 5 acres per year. The felt spacers and wrapping material are comprised of naturally occurring materials and eventually deteriorate. The plastic parts are inert and should not impact physical resources.

Ground-disturbing activities associated with construction of training transmitter sites (gravel pad, staging area, and gravel access road) would impact approximately 0.6 acre per site. The sites are not expected to contribute to secondary impacts to wind or water resources. Implementation of standard construction practices would reduce the potential for dust and erosion. No significant impacts to physical resources, including soil or water, would be anticipated to result from training transmitter site construction or airspace modifications.

Biological Resources

Biological resources are plants and wildlife, including threatened and endangered species, migratory birds, and domestic animals. Seven federally listed endangered species and six threatened species have the potential to occur under the current and proposed airspace. The Air Force has initiated informal consultation with the United States Fish and Wildlife Service (USFWS) to evaluate potential impacts. For most of the ROI, average noise exposure from aircraft under the Proposed Action or alternatives would be comparable to or slightly higher than that experienced in the current airspace. No scientific studies support significant negative impacts to wildlife or domestic animals at noise levels associated with current or proposed Shaw AFB training. In areas where noise levels are predicted to increase (specifically the expanded Bulldog A MOA, proposed Gamecock E, and Gamecock D/F under the Proposed Action and Alternative A, Bulldog A and B and Gamecock E and D in Alternative B), some animals, including special-status species, may be temporarily sensitive to new noise levels. For example, animals may startle or temporarily shift habitat use or activities in areas under new low-level flight. Although species may vary in their response, past research has documented that most wildlife and domestic animals would habituate and return to normal activities. A particularly close or loud aircraft overflight could still produce a startle reaction and negative response in habituated animals. Such incidents would likely be random and infrequent and would not negatively affect populations of special-status species. Regarding specific species, nest success of red-cockaded woodpeckers would not be expected to be affected by airspace modifications. The Proposed Action or Alternative A could increase the risk of bird-aircraft strikes for wood storks and other large birds in the area of the extended Bulldog A. This would not be the case for Alternative B.

Previous studies have documented that wildlife and domestic animals would not be harmed by residual chaff or flare materials. There is a very low likelihood of an individual animal being struck by falling flare debris. Chaff fibers, flare ash, and flare end caps and other inert materials would not accumulate in amounts that would affect forage or water quality. Because of the low rate of application and use of chaff fibers during defensive training, wildlife or domestic animals would have little opportunity to ingest, inhale, or otherwise come in contact with chaff fibers. Most animals would avoid chaff fibers and, even if they were ingested, they are unlikely to be available in amounts that could cause injury. An animal would have to consume many chaff bundles or billions of chaff fibers before toxic levels are reached. One controlled study demonstrated that calves would not eat chaff fibers unless the chaff was soaked in molasses. There was no internal damage from the chaff fibers. There are no recorded cases of domestic or wild animals ingesting chaff or flare debris.

Siting criteria for training transmitter sites include the avoidance of wetlands and sensitive areas for wildlife and a preference for areas already cleared of trees (such as agricultural land). Therefore, most wildlife species and native vegetation would not be affected by the training transmitter sites. Preliminary field evaluations were performed at three sites. No threatened or endangered species or their habitats were observed at three potential training transmitter sites under the Bulldog A MOA. Field surveys for threatened and endangered species would be conducted at other potential sites prior to final site approval and a determination would be made as to the potential effect to biological resources.

Cultural Resources

Cultural resources that are currently overflown by military training aircraft include prehistoric and historic districts, sites, structures, and artifacts that are eligible for listing or are listed on the National Register of Historic Places (NRHP). Cultural resources important to Native Americans but not considered significant under the National Historic Preservation Act (NHPA), such as those recognized by the Native American Graves Protection and Repatriation Act, could also be located beneath existing and proposed airspace, although none are known. In South Carolina, 29 NRHP-listed properties directly underneath the existing Gamecock MOAs or the proposed Gamecock E or F MOAs include four districts, a battle site, houses and commercial buildings, Fort Watson, and the Santee Indian Mound. Resources underneath the proposed Gamecock F MOA would be overflown at a minimum of 5,000 feet MSL, which will not affect the characteristics that make these resources eligible for the NRHP. Directly beneath the existing and proposed extension of Bulldog A airspace are 36 properties listed on the NRHP. These properties range from homes and plantations to churches and schools, and include six historic districts. NRHP resources under existing airspace Bulldog A are currently subjected to overflights without affecting their NRHP status.

Some of the NRHP properties within the expanded Bulldog A MOA are currently overflown by military aircraft using MTRs. It is not anticipated that the Proposed Action or an alternative expanding Bulldog A would detrimentally affect cultural resources under the airspace. The amount of chaff and flare debris associated with the Proposed Action or alternatives would be released over an extended area, minimizing the possibility of an adverse effect to NRHP properties. While the likelihood of chaff, flares, or residual components striking a NRHP property is minimal, at worst the potential damage would be similar to that of a large hailstone.

Training transmitters will be located in areas selected for their proximity to services, and will be cleared for impacts from the Proposed Action or an alternative in consultation with the Georgia and South Carolina State Historic Preservation Offices (SHPOs), in compliance with Section 106 of the National Historic Preservation Act (NHPA), and, if needed, with the Catawba Indian nation and the Eastern Band of the Cherokee Indians. Therefore, no impacts are expected to cultural resources from the Proposed Action or an alternative.

Land Use

There would be no anticipated change in general land use patterns, land ownership, land management plans, or special use areas due to airspace changes or use of chaff and flares.

Individuals finding chaff or flare debris on their property or in natural areas could be annoyed, but land use would not be expected to change. Aircraft noise levels would not change appreciably above current levels for any airspace unit except for the Proposed Action or Alternative A under the expanded Bulldog A MOA. In all airspace areas, aircraft noise would not be expected to significantly impact residential areas, farms, parks, or wildlife refuges. The Proposed Action or Alternative A would have a small annual increase in training flights within three miles of Magnolia Springs State Park that could result in annoyance to some people, although park use is not expected to change. The number of highly annoyed people in the area under the expanded Bulldog A MOA could increase from 1 to 4 percent of the population. This increased annoyance would apply primarily to individuals outside designated avoidance areas. Calculated noise levels show that few, if any, additional individuals would be highly annoyed in the same area if Alternative B were selected. Average noise levels in all cases would be below those identified by USEPA as a level for evaluating potential environmental consequences and no significant land use impacts are anticipated.

Training transmitter sites are generally expected to be on agricultural land leased by the U.S. government from private landowners. Land use would change on approximately 0.6 acres for the training transmitter equipment gravel pad and access road. Therefore, for the proposed six transmitter sites under the Proposed Action and Alternative A, approximately 3 to 4 acres would be affected by changed land use; approximately 2 acres would be affected for the three sites under Alternative B. This represents a negligible portion of the ROI. Training transmitter site selection would avoid special use areas such as wildlife refuges or other natural areas.

Socioeconomics

Socioeconomic concerns include potential effects on employment, personal income, property values, and other economic pursuits as a result of the new or expanded military training airspace. Detailed population and economic characteristics were evaluated for portions of counties under the existing and proposed airspaces. The proposed airspace modifications would not prohibit use of affected airways by general aviation. Altitude structures and FAA and Air Force ATC of the proposed airspace are in place to reduce conflicts between military use and civilian air traffic.

Concern was expressed by civil aviation pilots during scoping meetings that the lower level altitude structures of Gamecock E and D/F under the Proposed Action or Alternative A would interfere with flights, including air taxi operations. These concerns included having to fly at inefficient altitudes and in more turbulent air. Alternative B has a higher floor for Gamecock B and designates high and low airspace blocks for Gamecock E. These airspace elements would permit management flexibility that could reduce this concern.

The public expressed concern that the extension of Bulldog A MOA had the potential to constrain economic development opportunities in communities under or near the expanded airspace. Inadequate communication and potential constraints on IFR traffic were also noted as public concerns. These concerns would be somewhat reduced through FAA mandated avoidance areas around each public aviation facility affected by the proposed airspace. IFR traffic would have access to use of an Instrument Landing System (ILS) at an airport with

minimum delay. Life-flights to regional hospitals would continue to be given priority by ATC and would be expected to remain unimpeded by the proposed changes in military airspace. Alternative B includes a higher floor to the airspace that would not require avoidance areas.

Airspace modifications under the Proposed Action or Alternative A could affect some civil aviation. Airspace scheduling and coordination with FAA would be implemented to deconflict military and civilian aircraft. Neither the Proposed Action nor Alternative A or B is expected to impact regional socioeconomic resources or economic development in the counties underlying the airspace.

Use of chaff and flares and resulting plastic, wrapping, and felt materials that fall to the ground would not be in quantities to affect socioeconomic resources. Any damage, such as to a vehicle, would be handled through established claims procedures at Shaw AFB.

Construction activity associated with the proposed training transmitter sites could take place over several years. Employment and earnings in the localities surrounding the proposed sites would not be discernibly affected. No permanent or long-lasting socioeconomic effects are anticipated as a result of transmitter site development for either the Proposed Action or any alternative.

Environmental Justice

Federal agencies are required by law to address potential impacts of their actions on environmental and human health conditions in minority and low-income communities. Furthermore, they must identify and assess environmental health and safety risks that may disproportionately affect children. The low-income communities and the minority and youth population under the current airspace, the proposed airspace or alternatives, and the generally proposed locations of the new training transmitters were evaluated. The rural parts of counties associated with the airspace have generally not kept pace with the economic growth of South Carolina and Georgia. Although some areas of these counties are relatively economically depressed, there would be no disproportionately high or adverse impacts to minority or low-income communities that would result from the Proposed Action or an alternative. There would be no disproportionate health and safety risks to children.